## SECUENCE LISTING

- <110> Lobel, Leslie Lustbader, Joyce
- <120> EXPRESSION OF PROPERLY FOLDED AND SOLUBLE EXTRACELLULAR DOM AIN OF A GONADOTROPIN RECEPTOR
- <130> 0575/62259/JPW/SHS
- <160> 8
- <170> PatentIn version 3.0
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- <211> 1557
- <212> DNA
- <213> HOMO SAPIENS
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- catcattett etggtetggt gecaegeggt tetggtatga aagaaacege tgetgetaaa 420
- ttegaacgec agcacatgga cageccagat etgggtaeeg acgaegaega caaggecatg 480

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Glu Tyr Gln Gly Lys Leu Thr Val Ala Lys Leu Asn Ile Asp Gln Asn 50  $\,$  55  $\,$  60  $\,$ 

Pro Gly Thr Ala Pro Lys Tyr Gly Ile Arg Gly Ile Pro Thr Leu Leu 65 70 75 80

Leu Phe Lys Asn Gly Glu Val Ala Ala Thr Lys Val Gly Ala Leu Ser 85 90 95

Lys Gly Gln Leu Lys Glu Phe Leu Asp Ala Asn Leu Ala Gly Ser Gly

Ser Gly His Met His His His His His His Ser Ser Gly Leu Val Pro \$115\$

- Arg Gly Ser Gly Met Lys Glu Thr Ala Ala Ala Lys Phe Glu Arg Gln 130 135 140
- His Met Asp Ser Pro Asp Leu Gly Thr Asp Asp Asp Asp Lys Ala Met 145 150 155 160
- Ala Asp Ile Gly Ser Glu Phe Arg Ala Leu Arg Glu Ala Leu Cys Pro \$165\$
- Glu Pro Cys Asn Cys Val Pro Asp Gly Ala Leu Arg Cys Pro Gly Pro  $180 \,$   $185 \,$   $190 \,$
- Thr Ala Gly Leu Thr Arg Leu Ser Leu Ala Tyr Leu Pro Val Lys Val 195 \$200\$
- Ile Pro Ser Gln Ala Phe Arg Gly Leu Asn Glu Val Ile Lys Ile Glu 210 215 220
- Ile Ser Gln Ile Asp Ser Leu Glu Arg Ile Glu Ala Asn Ala Phe Asp 225 230 230 235
- Asn Leu Leu Asn Leu Ser Glu Ile Leu Ile Gln Asn Thr Lys Asn Leu 245 250 255
- Arg Tyr Ile Glu Pro Gly Ala Phe Ile Asn Leu Pro Arg Leu Lys Tyr \$260\$ \$265\$ \$270\$
- Leu Ser Ile Cys Asn Thr Gly Ile Arg Lys Phe Pro Asp Val Thr Lys 275 280 285
- Val Phe Ser Ser Glu Ser Asn Phe Ile Leu Glu Ile Cys Asp Asn Leu 290 295 300
- His Ile Thr Thr Ile Pro Gly Asn Ala Phe Gln Gly Met Asn Asn Glu 305 310 315 320
- Ser Val Thr Leu Lys Leu Tyr Gly Asn Gly Phe Glu Glu Val Gln Ser 325 330 335
- His Ala Phe Asn Gly Thr Thr Leu Thr Ser Leu Glu Leu Lys Glu Asn 340 345 350

Val His Leu Glu Lys Met His Asn Gly Ala Phe Arg Gly Ala Thr Gly 355 360 365

Pro Lys Thr Leu Asp Ile Ser Ser Thr Lys Leu Gln Ala Leu Pro Ser 370 380

Tyr Gly Leu Glu Ser Ile Gln Arg Leu Ile Ala Thr Ser Ser Tyr Ser 385 \$390\$

Leu Lys Lys Leu Pro Ser Arg Glu Thr Phe Val Asn Leu Leu Glu Ala 405 410 415

Thr Leu Thr Tyr Pro Ser His Cys Cys Ala Phe Arg Asn Leu Pro Thr 420 425 430

Lys Glu Gln Asn Phe Ser His Ser Ile Ser Glu Asn Phe Ser Lys Gln \$435\$

Met Leu Ala Glu Ser Glu Leu Ser Gly Trp Asp Tyr Glu Tyr Gly Phe 465 470 475

Cys Leu Pro Lys Thr Pro Arg Cys Ala Pro Glu Pro Asp Ala Phe Asn \$485\$

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Glu	Tyr 50	Gln	Gly	Lys	Leu	Thr 55	Val	Ala	Lys	Leu	Asn 60	Ile	Asp	Gln	Asn
Pro 65	Gly	Thr	Ala	Pro	Lys 70	Tyr	Gly	Ile	Arg	Gly 75	Ile	Pro	Thr	Leu	Leu 80
Leu	Phe	Lys	Asn	Gly 85	Glu	Val	Ala	Ala	Thr 90	Lys	Val	Gly	Ala	Leu 95	Ser
Lys	Gly	Gln	Leu 100	Lys	Glu	Phe	Leu	Asp 105	Ala	Asn	Leu	Ala	Gly 110	Ser	Gly
Ser	Gly	His 115	Met	His	His	His	His 120	His	His	Ser	Ser	Gly 125	Leu	Val	Pro
Arg	Gly 130	Ser	Gly	Met	Lys	Glu 135	Thr	Ala	Ala	Ala	Lys 140	Phe	Glu	Arg	Gln
His 145	Met	Asp	Ser	Pro	Asp 150	Leu	Gly	Thr	Asp	Asp 155	Asp	Asp	Lys	Ala	Met 160
Ala	Asp	Ile	Gly	Ser 165	Glu	Phe	Arg	Val	Phe 170	Leu	Cys	Gln	Glu	Ser 175	Lys
Val	Thr	Glu	Ile 180	Pro	Ser	Asp	Leu	Pro 185	Arg	Asn	Ala	Ile	Glu 190	Leu	Arg
Phe	Val	Leu 195	Thr	Lys	Leu	Arg	Val 200	Ile	Gln	Lys	Gly	Ala 205	Phe	Ser	Gly
Phe	Gly 210	Asp	Leu	Glu	Lys	Ile 215	Glu	Ile	Ser	Gln	Asn 220	Asp	Val	Leu	Glu
Val 225	Ile	Glu	Ala	Asp	Val 230	Phe	Ser	Asn	Leu	Pro 235	Lys	Leu	His	Glu	Ile 240
Arg	Ile	Glu		Ala			Leu				Thr	Pro	Glu	Ala	

- Gln Asn Leu Pro Asn Leu Gln Tyr Leu Leu Ile Ser Asn Thr Gly Ile \$260\$
- Lys His Leu Pro Asp Val His Lys Ile His Ser Leu Gln Lys Val Leu 275 280 285
- Leu Asp Ile Gln Asp Asn Ile Asn Ile His Thr Ile Glu Arg Asn Ser 290 295 300
- Phe Val Gly Leu Ser Phe Glu Ser Val Ile Leu Trp Leu Asn Lys Asn 305 310 315 320
- Gly Ile Gln Glu Ile His Asn Cys Ala Phe Asn Gly Thr Gln Leu Asp 325 330 335
- Ala Val Asn Leu Ser Asp Asn Asn Asn Leu Glu Glu Leu Pro Asn Asp 340 345 350
- Val Phe His Gly Ala Ser Gly Pro Val Ile Leu Asp Ile Ser Arg Thr 355 360 365
- Arg Ile His Ser Leu Pro Ser Tyr Gly Leu Glu Asn Leu Lys Lys Leu 370 375 380
- Arg Ala Arg Ser Thr Tyr Asn Leu Lys Lys Leu Pro Thr Leu Glu Lys 385 \$390\$
- Leu Val Ala Leu Met Glu Ala Ser Leu Thr Tyr Pro Ser His Cys Cys \$405\$ \$410\$
- Ala Phe Ala Asn Trp Arg Arg Gln Ile Ser Glu Leu His Pro Ile Cys \$420\$ \$425\$ \$430
- Asn Lys Ser Ile Leu Arg Gln Glu Val Asp Tyr Met Thr Gln Ala Arg \$435\$ \$440\$ \$445
- Gly Gln Arg Ser Ser Leu Ala Glu Asp Asn Glu Ser Ser Tyr Ser Arg 450 455 460
- Gly Phe Asp Met Thr Tyr Thr Glu Phe Asp Tyr Asp Leu Cys Asn Glu 465 470 475 480

- Val Val Asp Val Thr Cys Ser Pro Lys Pro Asp Ala Phe Asn Pro Cys 485 490 495
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His His His His

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Pro	Cys	Asn 35	Cys	Val	Pro	Asp	Gly 40	Ala	Leu	Arg	Cys	Pro 45	Gly	Pro	Thr
Ala	Gly 50	Leu	Thr	Arg	Leu	Ser 55	Leu	Ala	Tyr	Leu	Pro 60	Val	Lys	Val	Ile
Pro 65	Ser	Gln	Ala	Phe	Arg 70	Gly	Leu	Asn	Glu	Val 75	Ile	Lys	Ile	Glu	Ile 80
Ser	Gln	Ile	Asp	Ser 85	Leu	Glu	Arg	Ile	Glu 90	Ala	Asn	Ala	Phe	Asp 95	Asn
Leu	Leu	Asn	Leu 100	Ser	Glu	Ile	Leu	Ile 105	Gln	Asn	Thr	Lys	Asn 110	Leu	Arg
Tyr	Ile	Glu 115	Pro	Gly	Ala	Phe	Ile 120	Asn	Leu	Pro	Arg	Leu 125	Lys	Tyr	Leu
Ser	Ile 130	Cys	Asn	Thr	Gly	Ile 135	Arg	Lys	Phe	Pro	Asp 140	Val	Thr	Lys	Val
Phe 145	Ser	Ser	Glu	Ser	Asn 150	Phe	Ile	Leu	Glu	Ile 155	Cys	Asp	Asn	Leu	His 160
Ile	Thr	Thr	Ile	Pro 165	Gly	Asn	Ala	Phe	Gln 170	Gly	Met	Asn	Asn	Glu 175	Ser
Val	Thr	Leu	Lys 180	Leu	Tyr	Gly	Asn	Gly 185	Phe	Glu	Glu	Val	Gln 190	Ser	His
Ala	Phe	Asn 195	Gly	Thr	Thr	Leu	Thr 200	Ser	Leu	Glu	Leu	Lys 205	Glu	Asn	Val
His	Leu 210	Glu	Lys	Met	His	Asn 215	Gly	Ala	Phe	Arg	Gly 220	Ala	Thr	Gly	Pro
Lys 225	Thr	Leu	Asp	Ile	Ser 230	Ser	Thr	Lys	Leu	Gln 235	Ala	Leu	Pro	Ser	Tyr 240

Gly Leu Glu Ser Ile Gln Arg Leu Ile Ala Thr Ser Ser Tyr Ser Leu \$245\$ \$250\$ \$255\$

Lys Lys Leu Pro Ser Arg Glu Thr Phe Val Asn Leu Leu Glu Ala Thr 260 265 270

Leu Thr Tyr Pro Ser His Cys Cys Ala Phe Arg Asn Leu Pro Thr Lys 275 280 285

Glu Gln Asn Phe Ser His Ser Ile Ser Glu Asn Phe Ser Lys Gln Cys 290 295 300

Glu Ser Thr Val Arg Lys Val Asn Asn Lys Thr Leu Tyr Ser Ser Met 305 310 315

Leu Ala Glu Ser Glu Leu Ser Gly Trp Asp Tyr Glu Tyr Gly Phe Cys 325 330 335

Leu Pro Lys Thr Pro Arg Cys Ala Pro Glu Pro Asp Ala Phe Asn Pro  $340 \hspace{1.5cm} 345 \hspace{1.5cm} 350 \hspace{1.5cm}$ 

Cys Glu Asp Ile Met Gly Tyr Asp Phe Leu Arg Val Leu Ile Trp Leu 355 \$360\$

Ile Asn Ile Leu Ala Ile Met Gly Asn Met Thr Val Leu Phe Val Leu 370 375 380

Leu Thr Ser Arg Tyr Lys Leu Thr Val Pro Arg Phe Leu Met Cys Asn 385 390 395

Leu Ser Phe Ala Asp Phe Cys Met Gly Leu Tyr Leu Leu Leu Ile Ala 405 410 415

Ser Val Asp Ser Gln Thr Lys Gly Gln Tyr Tyr Asn His Ala Ile Asp 420 425 430

Trp Gln Thr Gly Ser Gly Cys Ser Thr Ala Gly Phe Phe Thr Val Phe  $435 \hspace{1cm} 440 \hspace{1cm} 445$ 

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Arg His Ala Ile Leu Ile Met Leu Gly Gly Trp Leu Phe Ser Ser Leu 485 490 495

Ile Ala Met Leu Pro Leu Val Gly Val Ser Asn Tyr Met Lys Val Ser 500 505 510

Ile Cys Phe Pro Met Asp Val Glu Thr Thr Leu Ser Gln Val Tyr Ile
515 520 525

Leu Thr Ile Leu Ile Leu Asn Val Val Ala Phe Phe Ile Ile Cys Ala 530 540

Cys Tyr Ile Lys Ile Tyr Phe Ala Val Arg Asn Pro Glu Leu Met Ala 545 550 555 560

Thr Asn Lys Asp Thr Lys Ile Ala Lys Lys Met Ala Ile Leu Ile Phe 565 570 575

Thr Asp Phe Thr Cys Met Ala Pro Ile Ser Phe Phe Ala Ile Ser Ala 580 585 590

Ala Phe Lys Val Pro Leu Ile Thr Val Thr Asn Ser Lys Val Leu Leu 595 600 605

Val Leu Phe Tyr Pro Ile Asn Ser Cys Ala Asn Pro Phe Leu Tyr Ala 610 615 620

Ile Phe Thr Lys Thr Phe Gln Arg Asp Phe Phe Leu Leu Ser Lys 625 630 635

Phe Gly Cys Cys Lys Arg Arg Ala Glu Leu Tyr Arg Arg Lys Asp Phe 645 650 655

Ser Ala Tyr Thr Ser Asn Cys Lys Asn Gly Phe Thr Gly Ser Asn Lys 660 665 670

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<400> 8

Met Ala Leu Leu Leu Val Ser Leu Leu Ala Phe Leu Ser Leu Gly Ser 1 5 10 15

Gly Cys His His Arg Ile Cys His Cys Ser Asn Arg Val Phe Leu Cys  $_{\rm 20}$ 

Gln Glu Ser Lys Val Thr Glu Ile Pro Ser Asp Leu Pro Arg Asn Ala

- Ile Glu Leu Arg Phe Val Leu Thr Lys Leu Arg Val Ile Gln Lys Gly 50  $\,$  55  $\,$  60  $\,$
- Ala Phe Ser Gly Phe Gly Asp Leu Glu Lys Ile Glu Ile Ser Gln Asn 65 70 75 80
- Asp Val Leu Glu Val Ile Glu Ala Asp Val Phe Ser Asn Leu Pro Lys 85 90 95
- Leu His Glu Ile Arg Ile Glu Lys Ala Asn Asn Leu Leu Tyr Ile Thr \$100\$
- Pro Glu Ala Phe Gln Asn Leu Pro Asn Leu Gln Tyr Leu Leu Ile Ser 115 120 125
- Asn Thr Gly Ile Lys His Leu Pro Asp Val His Lys Ile His Ser Leu 130 135 140
- Gln Lys Val Leu Leu Asp Ile Gln Asp Asn Ile Asn Ile His Thr Ile 145 \$150\$
- Glu Arg Asn Ser Phe Val Gly Leu Ser Phe Glu Ser Val Ile Leu Trp \$165\$ \$170\$ \$170\$
- Leu Asn Lys Asn Gly Ile Gln Glu Ile His Asn Cys Ala Phe Asn Gly 180 185 190
- Thr Gln Leu Asp Ala Val Asn Leu Ser Asp Asn Asn Leu Glu Glu 195 200 205
- Leu Pro Asn Asp Val Phe His Gly Ala Ser Gly Pro Val Ile Leu Asp 210 215
- Ile Ser Arg Thr Arg Ile His Ser Leu Pro Ser Tyr Gly Leu Glu Asn 225 230 230 235
- Leu Lys Lys Leu Arg Ala Arg Ser Thr Tyr Asn Leu Lys Lys Leu Pro 245  $\phantom{0}$  250  $\phantom{0}$  255
- Thr Leu Glu Lys Leu Val Ala Leu Met Glu Ala Ser Leu Thr Tyr Pro\$260\$

- Ser His Cys Cys Ala Phe Ala Asn Trp Arg Arg Gln Ile Ser Glu Leu 275 280 285
- His Pro Ile Cys Asn Lys Ser Ile Leu Arg Gln Glu Val Asp Tyr Met 290 295 300
- Thr Gln Ala Arg Gly Gln Arg Ser Ser Leu Ala Glu Asp Asn Glu Ser 305 310 315
- Ser Tyr Ser Arg Gly Phe Asp Met Thr Tyr Thr Glu Phe Asp Tyr Asp 325 330 335
- Leu Cys Asn Glu Val Val Asp Val Thr Cys Ser Pro Lys Pro Asp Ala 340 345 350
- Phe Asn Pro Cys Glu Asp Ile Met Gly Tyr Asn Ile Leu Arg Val Leu 355 360 365
- Ile Trp Phe Ile Ser Ile Leu Ala Ile Thr Gly Asn Ile Ile Val Leu 370 375 380
- Val Ile Leu Thr Thr Ser Gln Tyr Lys Leu Thr Val Pro Arg Phe Leu 385 390 395 400
- Met Cys Asn Leu Ala Phe Ala Asp Leu Cys Ile Gly Ile Tyr Leu Leu 405 410 415
- Leu Ile Ala Ser Val Asp Ile His Thr Lys Ser Gln Tyr His Asn Tyr \$420\$
- Ala Ile Asp Trp Gln Thr Gly Ala Gly Cys Asp Ala Ala Gly Phe Phe 435 440 445
- Thr Val Phe Ala Ser Glu Leu Ser Val Tyr Thr Leu Thr Ala Ile Thr 450 455 460
- Leu Glu Arg Trp His Thr Ile Thr His Ala Met Gln Leu Asp Cys Lys 465 470 470 480
- Val Gln Leu Arg His Ala Ala Ser Val Met Val Met Gly Trp Ile Phe 485 490 495
- Ala Phe Ala Ala Ala Leu Phe Pro Ile Phe Gly Ile Ser Ser Tyr Met

			500					505					510		
Lys	Val	Ser 515	Ile	Cys	Leu	Pro	Met 520	Asp	Ile	Asp	Ser	Pro 525	Leu	Ser	Gln
Leu	Tyr 530	Val	Met	Ser	Leu	Leu 535	Val	Leu	Asn	Val	Leu 540	Ala	Phe	Val	Val
Ile 545	Cys	Gly	Cys	Tyr	Ile 550	His	Ile	Tyr	Leu	Thr 555	Val	Arg	Asn	Pro	Asn 560
Ile	Val	Ser	Ser	Ser 565	Ser	Asp	Thr	Arg	Ile 570	Ala	Lys	Arg	Met	Ala 575	Met
Leu	Ile	Phe	Thr 580	Asp	Phe	Leu	Cys	Met 585	Ala	Pro	Ile	Ser	Phe 590	Phe	Ala
Ile	Ser	Ala 595	Ser	Leu	Lys	Val	Pro 600	Leu	Ile	Thr	Val	Ser 605	Lys	Ala	Lys
Ile	Leu 610	Leu	Val	Leu	Phe	His 615	Pro	Ile	Asn	Ser	Cys 620	Ala	Asn	Pro	Phe
Leu 625	Tyr	Ala	Ile	Phe	Thr 630	Lys	Asn	Phe	Arg	Arg 635	Asp	Phe	Phe	Ile	Leu 640
Leu	Ser	Lys	Cys	Gly 645	Cys	Tyr	Glu	Met	Gln 650	Ala	Gln	Ile	Tyr	Arg 655	Thr
Glu	Thr	Ser	Ser 660	Thr	Val	His	Asn	Thr 665	His	Pro	Arg	Asn	Gly 670	His	Cys
Ser	Ser	Ala 675		Arg	Val	Thr	Ser 680		Ser	Thr	Tyr	Ile 685	Leu	Val	Pro
Leu	Ser	His	Leu	Ala	Gln	Asn									

695